CM_identify_information

CM_id (CM identifier)	IP_address (server address)	avaiiable_day (effective term)	Company_name (sponsor name)	CM_name (CM title)
4byte	4byte	8byte	16byte	32byte

FIG. 1

response_user_data(i)

user_data_ start_code 0×000001B2	response_id 0×5245330	CM_identify_ information[i]
4byte	4byte	1byte

FIG. 2

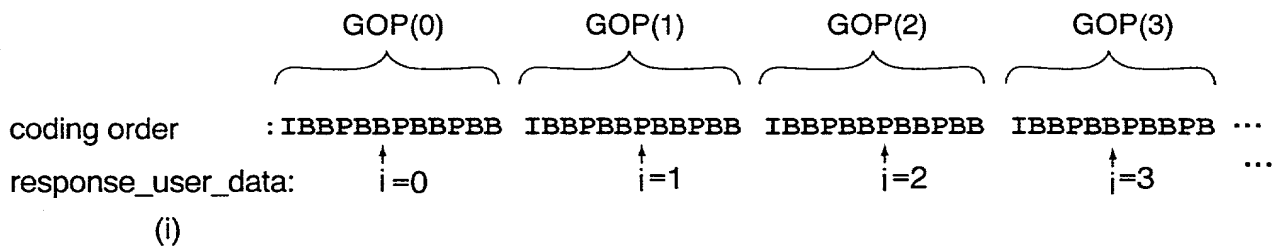
GOP(0)
GOP(1)
GOP(2)
GOP(3)
coding order
: IBBPBBPBBPBB IBBPBBPBBPBB IBBPBBPBBPBB IBBPBBPBBPB ...
response_user_data:
(i)
i=0
i=1
i=2
i=3
...

FIG. 3

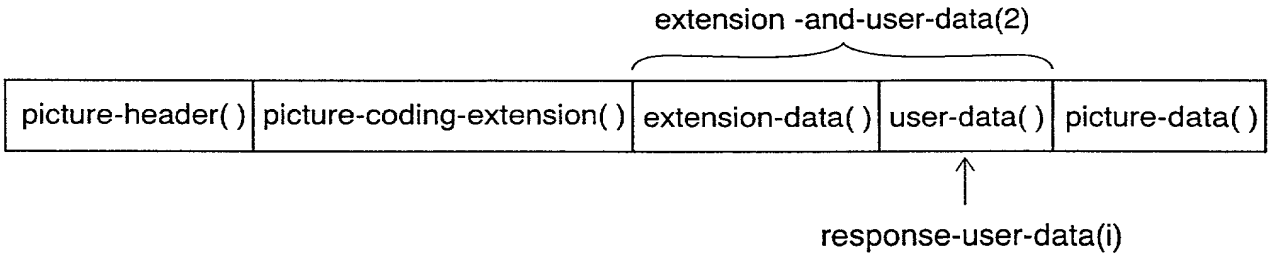
extension -and-user-data(2)
picture-header( )
picture-coding-extension( )
extension-data( )
user-data( )
picture-data( )
response-user-data(i)

FIG. 4

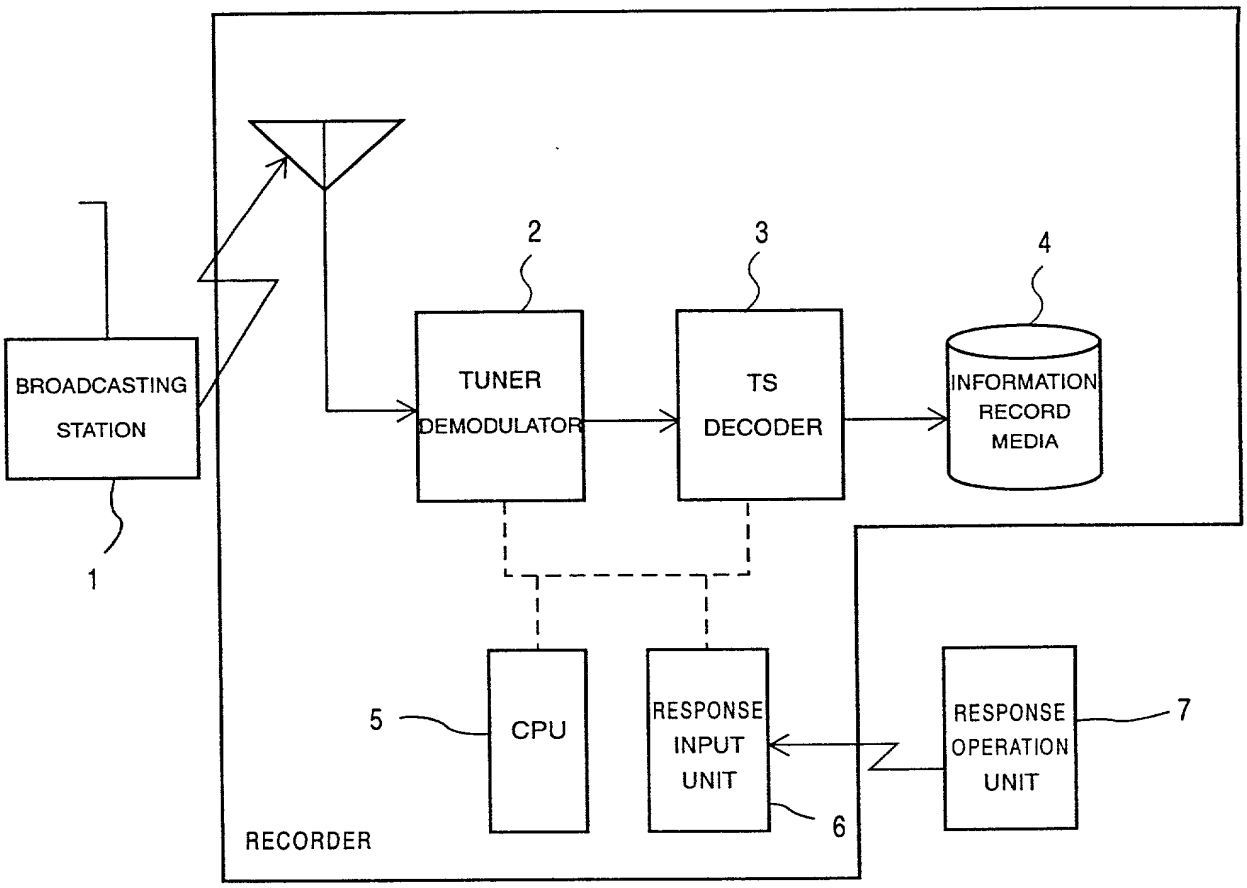
BROADCASTING STATION
1
2
TUNER DEMODULATOR
3
TS DECODER
4
INFORMATION RECORD MEDIA
5
CPU
RESPONSE INPUT UNIT
6
RESPONSE OPERATION UNIT
7
RECORDER

FIG. 5

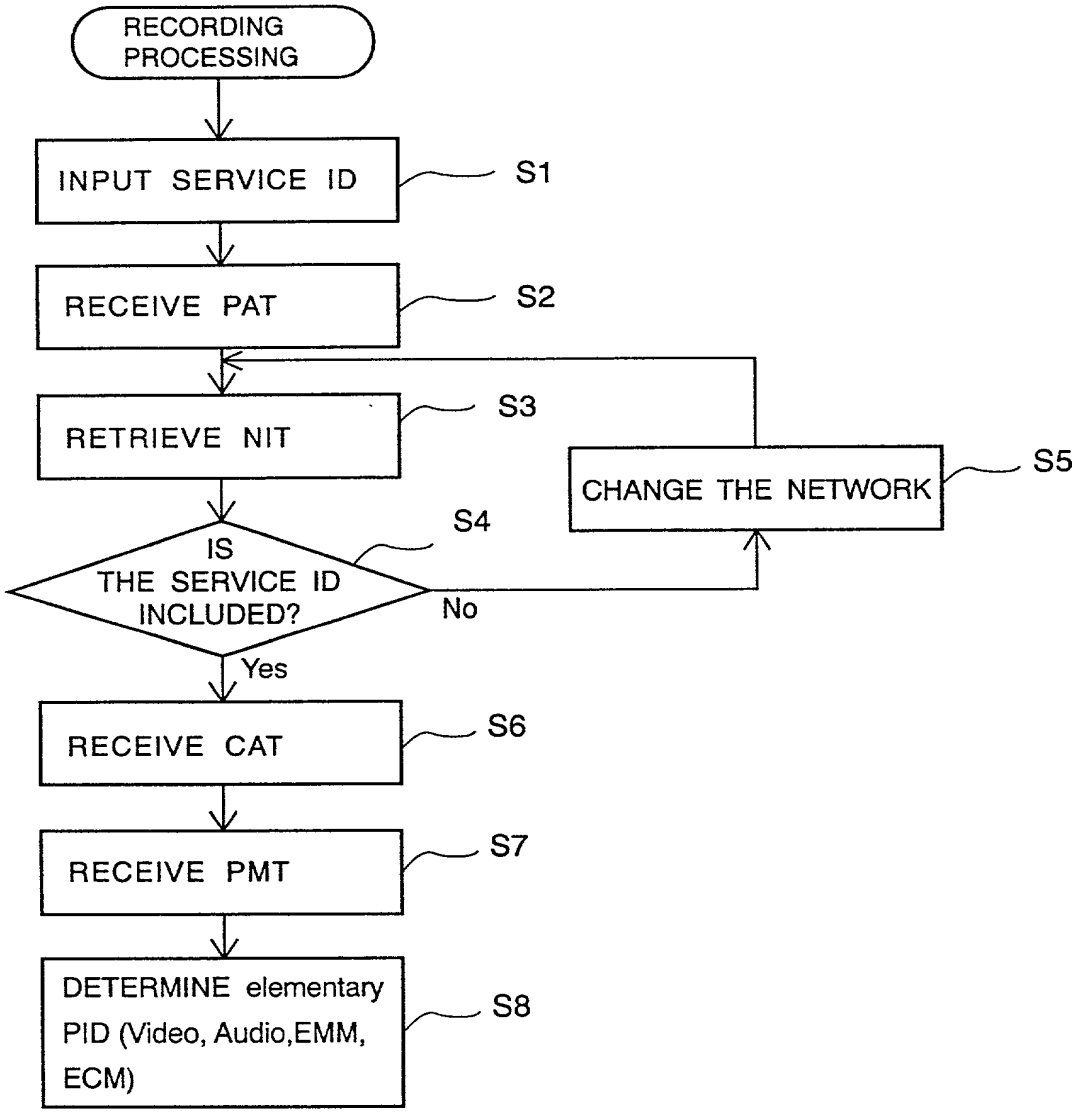
RECORDING PROCESSING
INPUT SERVICE ID
S1
RECEIVE PAT
S2
RETRIEVE NIT
S3
CHANGE THE NETWORK
S5
IS THE SERVICE ID INCLUDED?
S4
No
Yes
RECEIVE CAT
S6
RECEIVE PMT
S7
DETERMINE elementary PID (Video, Audio,EMM, ECM)
S8

FIG. 6

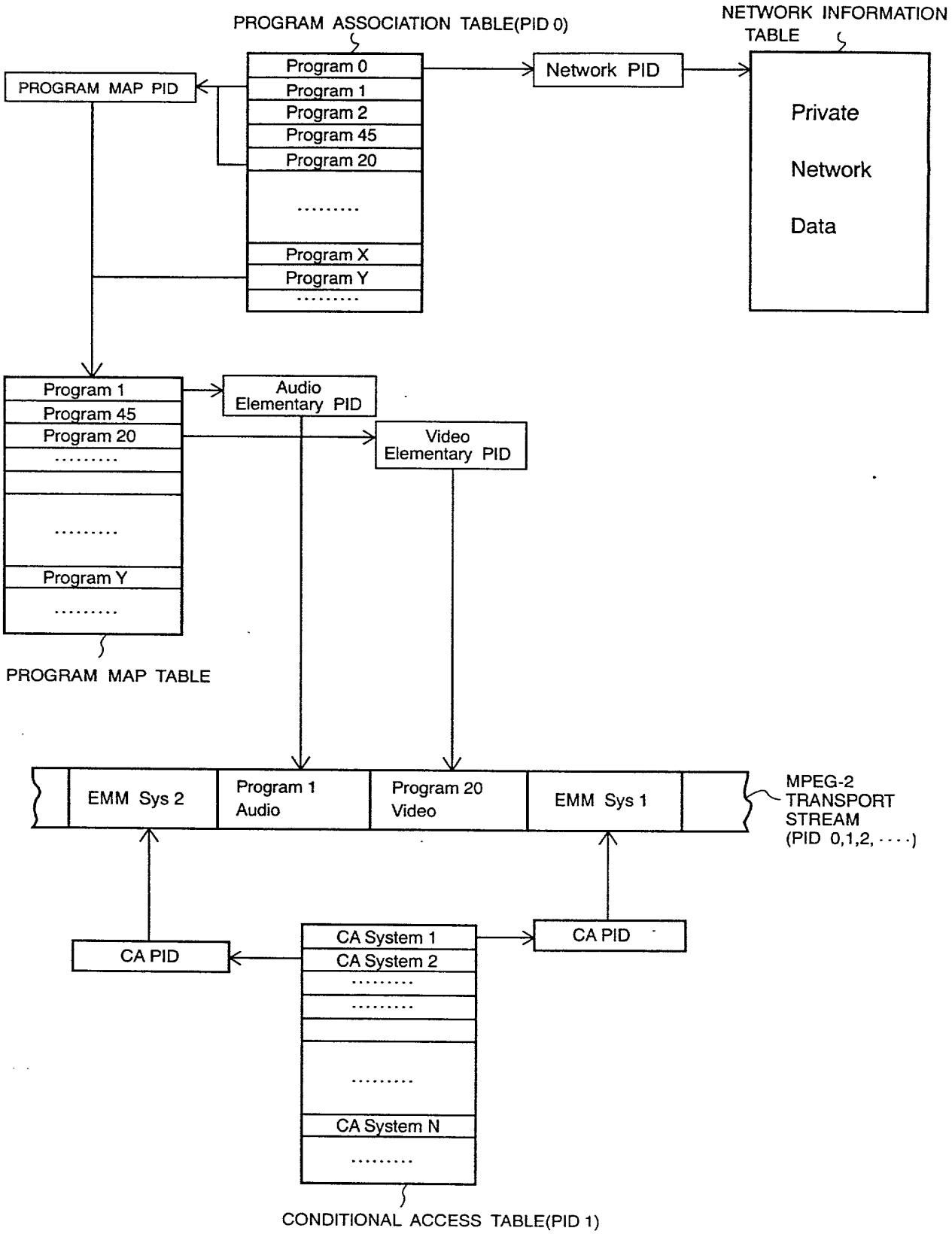
PROGRAM ASSOCIATION TABLE(PID 0)
NETWORK INFORMATION TABLE
Program 0
Program 1
Program 2
Program 45
Program 20
Program X
Program Y
Network PID
PROGRAM MAP PID
Private Network Data
Program 1
Program 45
Program 20
Program Y
Audio Elementary PID
Video Elementary PID
PROGRAM MAP TABLE
EMM Sys 2
Program 1 Audio
Program 20 Video
EMM Sys 1
MPEG-2 TRANSPORT STREAM (PID 0,1,2, ····)
CA PID
CA PID
CA System 1
CA System 2
CA System N
CONDITIONAL ACCESS TABLE(PID 1)

FIG. 7

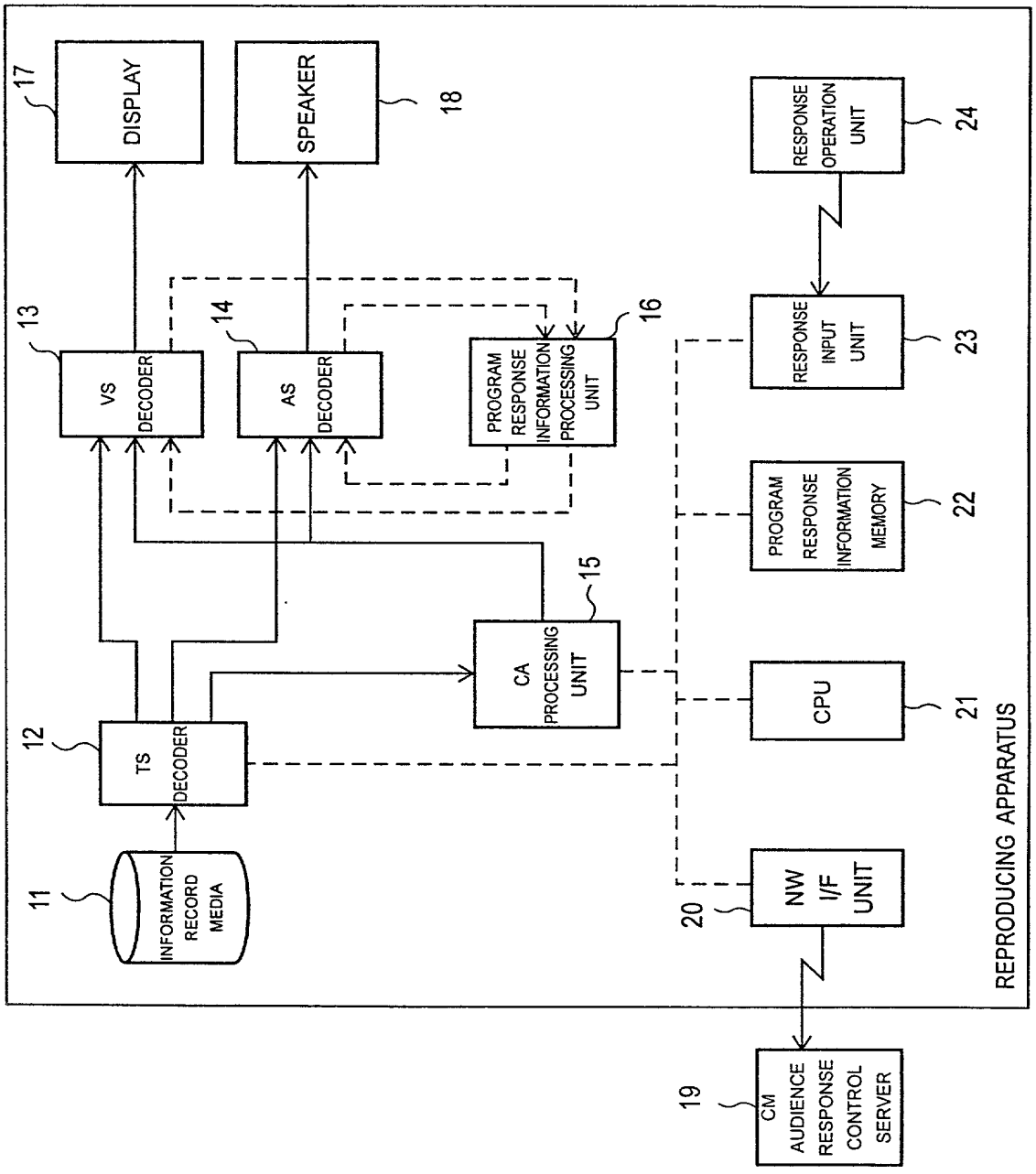
REPRODUCING APPARATUS
11
INFORMATION RECORD MEDIA
12
TS DECODER
13
VS DECODER
14
AS DECODER
15
CA PROCESSING UNIT
16
PROGRAM RESPONSE INFORMATION PROCESSING UNIT
17
DISPLAY
18
SPEAKER
19
CM AUDIENCE RESPONSE CONTROL SERVER
20
NW I/F UNIT
21
CPU
22
PROGRAM RESPONSE INFORMATION MEMORY
23
RESPONSE INPUT UNIT
24
RESPONSE OPERATION UNIT

FIG. 8

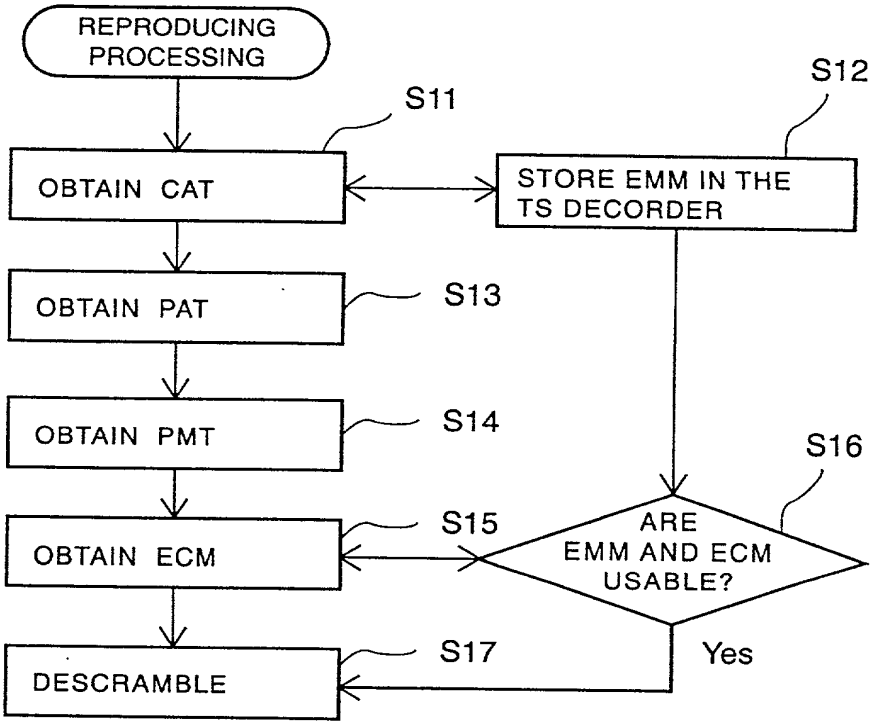
REPRODUCING PROCESSING
S11
OBTAIN CAT
S12
STORE EMM IN THE TS DECORDER
OBTAIN PAT
S13
OBTAIN PMT
S14
S16
S15
ARE EMM AND ECM USABLE?
OBTAIN ECM
Yes
S17
DESCRAMBLE

FIG. 9

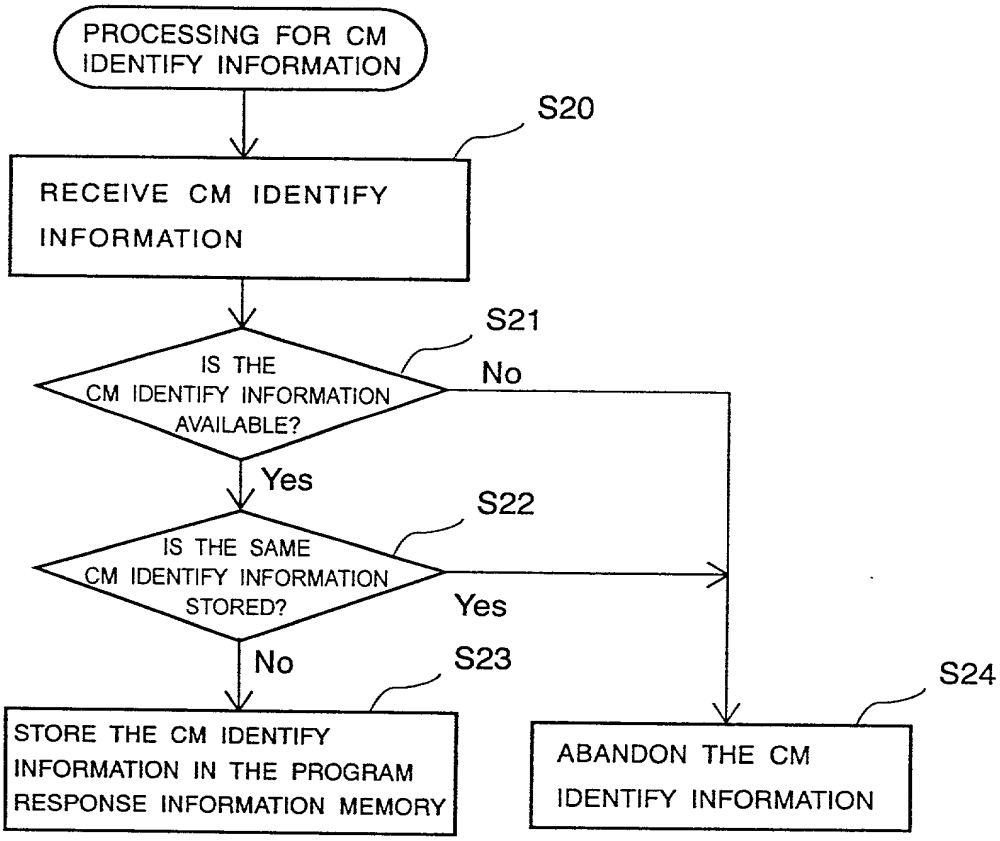
PROCESSING FOR CM IDENTIFY INFORMATION
S20
RECEIVE CM IDENTIFY INFORMATION
S21
IS THE CM IDENTIFY INFORMATION AVAILABLE?
No
Yes
S22
IS THE SAME CM IDENTIFY INFORMATION STORED?
Yes
No
S23
STORE THE CM IDENTIFY INFORMATION IN THE PROGRAM RESPONSE INFORMATION MEMORY
S24
ABANDON THE CM IDENTIFY INFORMATION

FIG. 10

CM_audience_response_information

CM_id	Apparatus_id

FIG. 11A

CM_audience_response_information

CM_id	Apparatus_id	User_id

FIG. 11B